

ABSTRACT

5 A method for integrating copper with an MIM capacitor during the formation the MIM capacitor. The MIM capacitor is generally formed upon a substrate and at least one copper layer is deposited upon the substrate and layers thereof to form at least one metal layer from which the MIM capacitor is formed, such that the MIM capacitor may be adapted for use with an embedded DRAM device. The MIM capacitor comprises a low-temperature MIM capacitor. At least one DRAM crown photo layer may be formed upon the substrate and layers thereof to form the MIM capacitor. The number of additional lithographic steps required in BEOL manufacturing operations is thus only one, while the capacitance of the MIM capacitor can be improved greatly because the sequential process of the DRAM crown photo patterning steps may be altered.

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